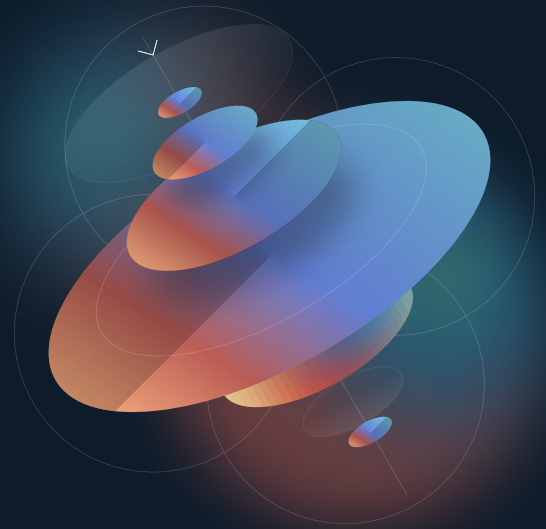


Testing with OpenAPI Specifications

Leverage Real-Time Discovery to Improve Security Testing



Wallarm Advanced API Security delivers two testing methods which leverage OpenAPI Specifications (aka Swagger) to improve API security:



Discovered Specifications

API Discovery generates an OpenAPI spec based on actual traffic to identify rogue endpoints, sensitive data flows, and other risks.



Provided Specifications

OpenAPI Security Testing leverages user-provided OpenAPI spec to easily generate tests which integrate into your pre-production pipeline.

Why API Security Testing Matters

Leveraging OpenAPI Specifications in AppSec, DevSec, or DevSecOps practices is a proactive and integral way to enhance API and application security. It brings security considerations to the forefront of development, streamlining vulnerability assessments, and reinforcing the principle that security should be a core part of every API and application's DNA.

OpenAPI specs are often created as part of the development cycle. However, oftentimes they may not exist for a variety of reasons (e.g., internal or partner API, tight timelines, etc.) or they may “drift” and become outdated – all of which means your security testing may not be in sync with your actual API risk profile.

The 2023 SANS Survey on API Security found that less than 50 percent of respondents have API security testing tools in place. Even fewer have API discovery tools (29 percent).

SANS Institute, [2023 SANS Survey on API Security](#) (Jun-2023)

The ability to identify designed vs. actual behavior and to automate pre-production testing based on real-world traffic data helps identify and mitigate vulnerabilities in your APIs, thus improving your API security posture.

Automated Security Testing

Wallarm Advanced API Security provides an easy-to-use approach to get real-world data incorporated into your pre-production testing. It leverages OpenAPI specs – either as-designed and/or built from actual traffic – to create targeted test cases for common vulnerabilities like cross-site scripting (XSS), SQL injection, and much more. This proactive approach helps identify and rectify security issues early in the development cycle.

Improve Your Pre-Prod API Testing

Wallarm leverages both discovered and provided OpenAPI specs, via the integrated capabilities of API Discovery and OpenAPI Security Testing, along with multiple built-in scanners, to improve API security by looping API vulnerability data into your development pipeline.

Discovered Specifications. API Discovery provides an “observed” view with no schema required. Instead, it creates OpenAPI specs on the fly based on actual traffic. It identifies where attackers are focused to help prioritize additional scrutiny (e.g., pentesting, bug bounty programs, etc.) and generates pre-production tests automatically via the OpenAPI Security Testing function.

Provided Specifications. OpenAPI Security Testing provides an “as-designed” view based on user-defined OpenAPI specs. It scans and identifies issues even if an endpoint has no traffic (e.g., attackers haven’t found them). It generates tests directly, based on uploaded specs, which integrate into your existing CI/CD pipeline for triage and disposition.

API Security Testing at a Glance

Wallarm provides a single platform that delivers automated security testing to both deployed and pre-production APIs. It delivers the discovery, remediation and integration capabilities you need to “shift left” and “protect right” – to build more resilient APIs and protect them regardless of where they are deployed.



Discovery

Continuously scan your entire API portfolio for issues, based on real-time traffic and user-provided OpenAPI specs – to get a complete view across your environment.



Remediation

Instantly defend against latent or active threats, scan for vulnerabilities, and apply virtual patches – to protect across your entire environment.



Integration

Automatically generate tests based on real-world data and integrate into your existing pre-production CI/CD pipeline – to continuously improve API resilience.